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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,657

12/30/2005

Andre-Francisco Casal Kulzer

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KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

CASTRO, ARNOLD

ART UNIT

PAPER NUMBER

3747

MAIL DATE

DELIVERY MODE

11/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,657

Applicant(s)

CASAL KULZER ET AL.

Examiner

Arnold Castro

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/23/2005</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 15-19, 21, 22, and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ackermann et al. US 20020166531A1.

Ackermann et al discloses a method according to the present invention is suitable for starting a direct-injection internal combustion engine having at least two cylinders without using a starter motor. Prior to beginning the method, the position of the rotation angle crankshaft of the internal combustion engine, i.e., the position of the pistons in the cylinders of the internal combustion engine, is determined. In the case of an internal combustion engine having four or more cylinders, the piston of at least one cylinder will be in the working phase.

If in the case of an internal combustion engine having fewer than four cylinders, no piston of a cylinder is in the working phase, the intake and exhaust valves of the cylinder which is in the intake phase are brought into a position corresponding to the working phase, i.e., the intake and exhaust valves are closed.

For free operation of the intake and exhaust valves, a camshaft-free

control is provided, for example, with which each intake and exhaust valve may be controlled separately from the other valves and independently of the position of the camshaft. For camshaft-free control, the intake and/or exhaust valves are equipped with a regulating unit either individually or jointly for a plurality of valves. The regulating unit may be actuated hydraulically, piezoelectrically, electromagnetically or by some other method. A plurality of camshaft-free controls for intake and exhaust valves are described from related art and may be used in conjunction with the present invention.

As an alternative, the intake and exhaust valves may have, e.g., a variable camshaft control element on the intake side and a variable valve lift for free actuation. It is thus possible to adjust the intake camshaft so that the intake valves are opened briefly in the intake phase only at the beginning and are thus brought into a position corresponding to the working phase. In this way, earlier closing of the intake may be set on the intake side.

To reduce compression resistance during the starting operation according to the present invention, each compression phase may be shortened suitably by early or late closing of corresponding intake valves 5 (which are opened during the intake phase taking place before the compression phase). The method described here may also be used with appropriate modification for internal combustion engines having more than four cylinders.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Ackermann et al. US 20020166531A1 in view of Sieber DE 19960984 A1

Ackermann et al. applies as in claim 16 above

Sieber discloses a method wherein at least one of the intake camshaft and the discharge camshaft is already adjusted during a deactivation of the internal combustion engine for a subsequent start in the start-up operating mode.

At time of invention it would have been obvious to modify Ackermann by position valves and position as taught in Sieber. Motivation would have been to improve starting conditions over random stopping.

6. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ackermann et al.

It would have been obvious to a person of ordinary skill in the art to decrease the retardation in a stepwise manner with increasing rotational speed of the internal combustion engine and deactivate the retardation once a predefinable minimum rotational speed of the internal combustion engine is exceeded. Because it is well known the need to retard lessons with increasing speed and is no longer required when idle speed is reached.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnold Castro whose telephone number is (571) 272-4839. The examiner can normally be reached on MTWTF 3pm-11pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen K. Cronin can be reached on 571-272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/540,657
Art Unit: 3747

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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STEPHEN K. CRONIN
SUPERVISORY PATENT EXAMINER